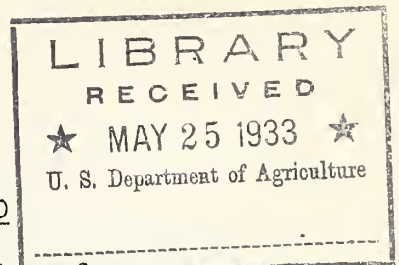


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Bi-1281
May '33

United States Department of Agriculture
Bureau of Biological Survey



PRELIMINARY REPORT ON STUDY OF RAVEN'S FOOD

By Arnold L. Nelson, Junior Biologist, Division of
Food Habits Research

During the early stages of an investigation to determine the economic status of the raven, the Bureau of Biological Survey has studied the stomach contents of 18 adult and 66 nestling ravens collected from June 1 to 23, 1932, in the vicinity of the Lake Malheur Bird Refuge, in southeastern Oregon. The results of this study form the basis of the following preliminary report, bird and egg remains being here given particular consideration because of the somewhat prevalent belief that depredations upon nestling birds and bird eggs in May and June nullify any desirable habits of the raven.

Rabbits and Cicadas Form Half of June Diet

The stomach contents of these 18 adult and 66 nestling birds show that the ravens frequenting the Lake Malheur Bird Refuge make more than half their June diet of rabbits and cicadas. The rest is composed of other insects, carrion, small birds (mostly nestlings), toads, lizards, bird eggs (represented by shell fragments), corn, and oats, in the order named.

Bird Remains Total 6 1/2 Percent

Bird remains, representing only a little more than 6 1/2 percent of the total food of the ravens studied, occurred in 21 of the 84 stomachs--2 of adults and 19 of nestlings of 9 broods. In some cases repeated occurrences of an item in different stomachs from the same brood meant division of a single catch, rather than the making of several kills.

Shell Fragments Make 2 Percent of Food

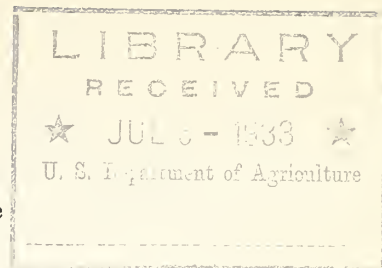
Shell fragments of bird eggs, forming 2 percent of the total food of the 84 birds, occurred in 14 stomachs--4 of adults and 10 of nestlings. Since shell alone could be observed, the bulk percentage of this item is not considered an accurate indicator of the quantity of egg material consumed. Few, if any, occurrences of eggs passed unnoticed, however, for a mere trace of shell is readily detected. Shell fragments do not always indicate damage. For instance, some of those in the stomachs studied may have been broken bits of hatched eggs.

Further Studies Needed

An estimate of the actual damage represented by bird remains and shell fragments must include a consideration of the breeding capacity of a species as offsetting the raven's depredations. The damage, in other words, must not be determined solely by the number of eggs eaten or the number of nests destroyed during one period, but by the effect on the final and total hatch for the whole season. Furthermore, no valid general condemnation or praise of the raven can be made without laboratory analyses of the contents of a large number of stomachs collected at all seasons and in all parts of the bird's range, and these analyses must be supplemented by field studies during May and June, when damage to nests is likely to be greatest.

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Bi-1282

United States Department of Agriculture
Bureau of Biological Survey
Washington, D.C.



May 13, 1933

Memorandum re Unpaid Government Obligations.

It is very important that vouchers covering obligations incurred for the month of May and for any time prior thereto and for purchases made early in June be received in the Bureau early in June so that payment may be made by June 12th as far as practicable.

To this end it is requested that employees submit their May expense accounts and itinerary reports as soon after June 1st as possible and also that May payrolls be made up promptly. Vouchers covering supplies, etc., should be prepared and forwarded to the Bureau as soon as the supplies are received. Receipts on form Bi-200 for items handled through the Washington office should be returned as soon as shipments have been received.

Your cooperation in promoting early payment of all obligations is urgently requested.

Paul G. Redington.

Paul G. Redington,
Chief.

1-9
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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY
WASHINGTON, D. C.

IN REPLY REFER TO
Bi-1233

Dear

Your communication of _____ requesting
information relative to Sullys Hill National Game Preserve,
North Dakota, has been received.

Sullys Hill Game Preserve is a picturesque forested tract bordering on Devils Lake, North Dakota, one mile north-east of the Fort Totten Indian School. It is readily accessible to tourists by way of the Burtness Scenic Highway; by rail over the Great Northern and Soo lines to the town of Devils Lake (14 miles north of the preserve), and thence by road; by rail over the Great Northern Railroad to Narrows, North Dakota, and thence by road; and by launch from Chautauqua on the north shore of Devils Lake.

The Sullys Hill area was originally set aside as a national park by Presidential proclamation of June 2, 1904 (33 Stat. 2368), under act of Congress approved April 27, 1904 (33 Stat. 322). It was made a big-game preserve by act of Congress of June 30, 1914 (38 Stat. 433), and was jointly administered as a national park and game preserve by the Departments of the Interior and Agriculture. By act of Congress approved March 3, 1931 (46 Stat 1509), the Sullys Hill area was definitely eliminated from the national-park system and turned over to the Department of Agriculture for administration as a game preserve, refuge, and breeding ground for wild animals and birds. At the same time the preserve was enlarged to include 214 acres of adjacent reliction lands uncovered by the recession of Devils Lake. The total area of the preserve is 993.85 acres.

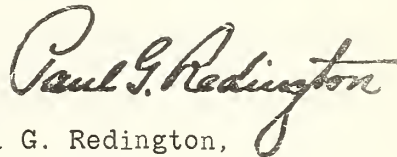
The Bureau of Biological Survey administers the area primarily as a big-game preserve, though by Executive order of December 22, 1921, it was made a refuge for birds also. Thus all forms of bird and mammal life are afforded protection

within this reservation. A 700-acre tract was enclosed in 1916 by the erection of an 88-inch heavy woven-wire big-game fence, in which are maintained small herds of buffalo, elk, and deer, and a few antelope. Small flocks of mallard ducks and Canada geese breed there in semi-captivity, and their numbers are augmented seasonally by migrant geese and various other species of waterfowl, as well as by other species of migratory and resident birds.

Sullys Hill has an elevation of about 400 feet and is the high point of the preserve and the adjacent region. The region about the preserve is rich in historical interest. During the early part of the nineteenth century and until after 1860 it was the objective of many military and trading expeditions. General Alfred Sully, for whom the hill was named, successfully conducted campaigns against hostile Indians in that region.

A United States Reservation Protector under the Biological Survey is stationed on this preserve to care for the big-game animals and other wild life and to conduct visitors to various points of interest. The preserve is open to visitors during the entire year, and though camping facilities have not been fully developed, a tract of land surrounding Sweetwater Lake, within the area, has been fenced off for use as a picnic ground. There a shelter, rest houses, and playgrounds, with equipment, are available for use of visitors. Persons visiting the preserve for picnic purposes and to see the big-game animals during the year ended December 31, 193 , totaled

Very truly yours,

A handwritten signature in cursive script that reads "Paul G. Redington". The signature is written in dark ink and is positioned above the printed name and title.

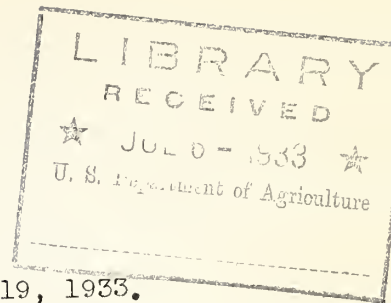
Paul G. Redington,
Chief.

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Bi-1284

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Biological Survey
Washington, D. C.



May 19, 1933.

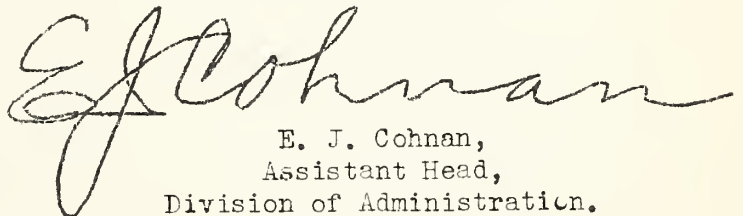
MEMORANDUM

Important instructions relative to solicitation
of bids in the field.

In view of the enactment by Congress of what is generally called the farm relief bill which provides for various processing taxes, adjustment charges, etc., on different kinds of commodities, hereafter whenever bids are solicited in the field on any articles, materials, supplies, etc., the invitation must contain a provision reading as follows:

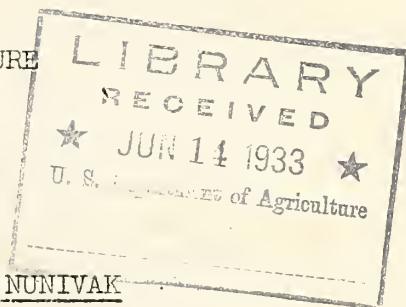
"Prices bid herein include any Federal tax heretofore imposed by the Congress which is applicable to the material on this bid. If any sales tax, processing tax, adjustment charge, or other taxes or charges are imposed or changed by the Congress after the date set for the opening of this bid and made applicable directly upon the production, manufacture or sale of the supplies covered by this bid, and are payable by the contractor on the articles or supplies herein contracted for, then the prices named in this bid will be increased or decreased accordingly, and any amount due the contractor as a result of such change will be charged to the Government and entered on vouchers (or invoices) as separate items."

This provision will of course be in addition to that required by the last paragraph of Bureau Memorandum Bi-1264.


E. J. Cohnan,
Assistant Head,
Division of Administration.

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B527
Bi-1285
June '33.

UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D. C.



REGULATIONS FOR THE ADMINISTRATION OF NUNIVAK
ISLAND RESERVATION, ALASKA.

By virtue of authority vested in the Secretary of Agriculture by Section 10 of the Migratory Bird Conservation Act of February 18, 1929 (43 Stat. 1222; U. S. Code Supp., title 16, sec. 715i), the act of June 28, 1906, to protect wild life and property of the United States on Federal refuges, as amended by act of April 15, 1924 (43 Stat. 98; U. S. Code, title 18, sec. 145), and otherwise, I, R. G. Tugwell, Acting Secretary of Agriculture, do hereby prescribe the following regulations, effective June 1, 1933, for the administration of the Nunivak Island Reservation, Alaska, established by Executive Order of April 15, 1929, and hereinafter referred to as the "reservation":

Regulation 1.--Entry upon and occupancy of the Reservation.

1. Entry upon, or occupancy or use of, any part of the reservation for any purpose, except in accordance with these regulations, is prohibited.

2. Pursuant to the exception contained in the Executive Order establishing the reservation, nothing in these regulations is intended to restrict entry upon or occupancy of the reservation by official representatives of the Departments of War, Navy, or Commerce for military, naval, or lighthouse purposes, respectively, or the Department of the Interior for educational purposes.

Residents (5 years)

3. Permanent residents who have resided within the limits of the reservation continuously for 5 years immediately preceding the effective date of these regulations for the purpose of making their permanent homes therein, may, without permit --

(a). Take game animals, game birds, and fur-bearing animals, so far as permitted by, and in conformity with, the Alaska Game Law of January 13, 1925 (43 Stat. 739; U. S. Code, title 48, sec. 192-211), as amended, and the regulations prescribed thereunder.

(b). Own, erect additions to, and maintain residences or other lawful structures erected and occupied or used prior to the effective date of these regulations.

And such residents may, with a permit issued as hereinafter provided, for --

(c). Own, erect or maintain residences or other lawful structures after the effective date of these regulations.

(d). Own, possess, or harbor dogs.

Residents (less than 5 years)

4. Permanent residents who have resided within the limits of the reservation for less than 5 years immediately preceding the effective date of these regulations, may, under permit issued as hereinafter provided for --

(a). Take game animals, game birds, and fur-bearing animals, so far as permitted by, and in conformity with, the Alaska Game Law of January 13, 1925, as amended, and the regulations prescribed thereunder.

(b). Own, erect additions to, and maintain residences and other lawful structures erected and occupied or used prior to the effective date of these regulations.

(c). Own, erect, and maintain residences or other lawful structures after the effective date of these regulations.

(d). Own, possess, or harbor dogs.

Nonresidents

5. A person who has not resided within the limits of the reservation prior to the effective date of these regulations may, under permit issued as hereinafter provided for, take game animals, game birds, and fur-bearing animals, so far as permitted by, and in conformity with, the Alaska Game Law of January 13, 1925, as amended, and the regulations prescribed thereunder; but no such permit will be issued if such taking will interfere with the interests and welfare of the native residents. And such nonresidents may, with like permit, own, possess, or harbor dogs.

6. Residents within the meaning of paragraph 3 of these regulations may, under permits issued as hereinafter provided for, occupy land within the reservation (a) for raising fur-bearing animals in pens; (b) for grazing stock that was on the reservation on the effective date of these regulations or the natural increase of such stock; and (c) for raising not to exceed 5 head of any kind of stock brought into the reservation for breeding purposes; but shall not introduce sheep or other livestock into the reservation unless it is free of external parasites, including lice, scab mites, true ticks, and sheep ticks (Molophagus ovinus) and then only under appropriate permit: Provided, however, That nothing in these regulations shall be construed to interfere with experiments of the Bureau of Biological Survey with reindeer and caribou or with such other animals as it may hereafter introduce for experimental purposes.

Aliens

7. No permit will be granted to an alien, or to a corporation or company more than 50 per cent of whose stock or capital is owned by an alien or aliens, to engage in stock raising or the keeping or breeding of fur-bearing animals.

Regulation 2.--Permits

Revocable permits, required by these regulations, will be granted by the Administrative Officer, Bureau of Biological Survey, Juneau, Alaska, when he shall find that the enjoyment of the privileges sought will not interfere with the objects for which the reservation was established, or with the safety and welfare of the native residents on the reservation; and such privileges shall be exercised for such length of time and under such limitations and conditions as may be expressed in the permits.

Regulation 3.--Application for Permits

Application for permits should be addressed to the Administrative Officer, Bureau of Biological Survey, Juneau, Alaska, and must give the name (legibly written or printed), the post-office address, the citizenship of the applicant, and the length and dates of residence within the reservation or elsewhere, and must contain references as to applicant's character, reliability, and resources; and if applicant is a corporation or company, the application must give the home address and the place and date of incorporation or organization, together with the names and addresses of the principal officers of the corporation or company, and a sworn statement by a responsible officer showing the percentage of alien ownership; and

If wild animals or birds are to be taken, a statement of the number of each species desired and whether for scientific, propagation, exhibition, or other purposes; or,

If it is desired to possess or maintain a dog or dogs within the reservation, the number, and the sex, name, and distinguishing characters or marks, if any, of each, and the purposes for which possession within the reservation is desired; or,

If it is desired to construct a building, shed, or other structure, information regarding the nature of the operations to be conducted therein or in conjunction therewith; or,

If it is desired to use or occupy any portion of the reservation for the keeping of fur-bearing animals in pens, or the grazing of livestock, the location of such area by approximate latitude and longitude, a description of the character thereof, whether there are any native or aboriginal improvements thereon, and if so, to whom they belong and when last used, and any information the applicant has concerning its suitability for the purpose intended, stating his source of information regarding it and whether he has personally examined it, together with the number of animals he proposes to maintain in pens or place thereon, and the date he expects, or is prepared, to begin operations; and

If it is desired to bring into the reservation animals for breeding purposes, the number, and the kind, and sex of each; whether registered or pure

bred; source from which obtained; whether and when inspected for disease, lice, mites, and other parasites; and, if males, whether they will be available for breeding service to stock owners on the reservation; and

Any other details or information necessary to give a clear understanding of the privileges the applicant desires to obtain.

Regulation 4.--Fees

Such fees as may be commensurate with the value of the privilege may be fixed and exacted by the Administrative Officer, Bureau of Biological Survey, Juneau, Alaska, for permits to occupy and use land within the reservation, such fees, when collected to be accounted for and deposited by such officer in accordance with the fiscal laws and regulations applicable to the accounting for and deposit of public moneys.

Regulation 5.--Transfer of Permits

No permit issued under authority of these regulations shall be sold, bartered, exchanged, or transferred by the permittee to any other person, and no agreement for such shall be made by such permittee, without the previous approval of the Administrative Officer, Bureau of Biological Survey, Juneau, Alaska, granted after the permittee shall have submitted to him full details of any proposed sale, barter, exchange or transfer of such permit. In the event of such approval of such transfer of permit, the permittee shall surrender the former permit for cancellation and the issuance of a new permit in accordance with these regulations to the person to whom it is being sold, exchanged, or transferred.

Regulation 6.--Cancellation of Permits

All permits issued under authority of these regulations are subject at any time to discretionary revocation or termination by the Secretary of Agriculture.

The Administrative Officer, Bureau of Biological Survey, Juneau, Alaska, may revoke or cancel any outstanding permit issued under the authority of these regulations for any use or privilege concerning the reservation upon the request of, or under mutual agreement with, the permittee; for failure of the permittee to report as required by the permit; for failure of the permittee to place a specified number of foxes in pens or to stock the area under permit with the number of other animals as required by, and within the terms of, the permit; for abandonment of the area, purpose, use, or privilege covered by such permit; or for the molesting by the permittee of native burying grounds or improvements or interfering with natives cultivating accustomed lands; and the ex-officio Commissioner for Alaska designated by the Secretary of Agriculture pursuant to the provisions of the act of February 27, 1927 (44 Stat. 1068; U. S. Code, Supp., title 5, sec. 119) may cancel any outstanding permit relating to said reservation for any other good and sufficient reason.


An appeal may be taken from any administrative action or decision of said administrative officer or said ex-officio commissioner upon filing with the officer who rendered the decision a written request for reconsideration thereof, or a notice of appeal. Decisions of said administrative officer, or of ex-officio commissioner, shall be final unless appeal is taken therefrom within a reasonable time. Decisions of said administrative officer appealed from shall be reviewed by the Chief of the Bureau of Biological Survey, and decisions of said ex-officio commissioner by the Secretary of Agriculture. In cases where delay would be prejudicial, the Secretary will consider a direct appeal from any action of the administrative officer.

Unless the written notice of appeal contains an acceptable reason for allowing a longer time for the preparation of the case, the appellant shall file immediately a statement or brief setting forth in detail the respects in which the action or decision from which appeal is taken is contrary to or in conflict with the law, the regulations of the Secretary of Agriculture, or the determined facts. Upon receipt of such statement or brief the officer from whose action or decision the appeal is made shall prepare a statement or brief reviewing the case and presenting the facts and considerations upon which his action or decision is based. The two statements or briefs, together with all papers comprising the record in the case, shall then be transmitted to the officer to whom the appeal is made, who will thereupon review the case and advise both the appellant and the subordinate officer of his decision.

Regulation 7.--Removal of Property

Upon the termination of any permit affecting the reservation by expiration, by forfeiture, or by cancellation pursuant to regulation 6 hercof, in the absence of an agreement to the contrary, if all fees due the Government have been paid, the permittee may, within a reasonable period, to be determined by the Administrative Officer, Bureau of Biological Survey, Juneau, Alaska, remove all property or make such disposition thereof as is satisfactory to said officer, including fur-bearing animals belonging to him, together with any buildings or improvements of any kind that may have been erected by him; but if not removed or satisfactorily disposed of within the period of time specified by said administrative officer, such animals, buildings, or improvements shall become the property of the United States.

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused the seal of the Department of Agriculture to be affixed in the City of Washington, this 12th day of May, 1933.



Acting Secretary of Agriculture.

(SEAL)

United States Department of Agriculture
Bureau of Biological Survey
Washington, D. C.

OBSERVATIONS ON SO-CALLED "BLOAT" IN RABBITS

By F. D. McKenney, Agent, Wild-Life Disease Investigations*

- - - - -

Commercial development of the rabbit industry has required careful observance of feeding principles in order to obtain maximum growth of animals in a brief period. Close confinement and efforts to obtain maximum consumption of feed are not always conducive to the best health of the animals, however, especially when as is often the case, the feed supplied is not of standard quality. This has served to focus attention on the mortality in rabbitries, which in many instances may represent the difference between profit and loss. The extent of this mortality, which is sometimes directly attributable to the kind of feed provided, has brought to light the importance of digestive disturbances, some of which have come to be recognized by breeders as distinct diseases. One that causes considerable financial loss to the industry each year is known as "bloat".

Bloat is not new to the rabbit industry, as the literature adequately describes the disease. Until the past two years, however, no extensive effort was made to determine the cause or methods of prevention. That the disease is not restricted sectionally is attested by the fact that requests for information concerning it have been received from all parts of the United States where rabbits are raised, as well as from a few foreign countries.

During the past two years the Bureau of Biological Survey has experimented intensively to assist rabbit breeders in controlling this disease. Repeated attempts have been made with susceptible animals to reproduce it experimentally by (1) inoculating those that had never had the disease with blood and mucus and other excretions of animals showing acute symptoms; (2) feeding them with intestinal contents of affected animals; (3) bringing them in direct contact with animals showing the symptoms; (4) inoculating them with bacterial cultures isolated from animals dying of the disease.

Though all efforts to reproduce the disease experimentally have failed, the data and observations indicate that it is not infectious or contagious and that sanitary measures, although always desirable, have little if any effect in preventing its occurrence. Present information points to its being a digestive disorder affecting rabbits at all ages, and often attributable to some undesirable feed or feeding practice.

The first characteristic symptoms of the disease are lack of appetite, drowsiness, rough dull fur, and a grinding of the teeth. Animals may show intense thirst and sit by the water crock drinking at frequent intervals. Some

*The findings here recorded have been developed in conjunction with the scientific staff in the Department of Bacteriology, Medical School, University of Southern California, at Los Angeles, and the staff of the United States Rabbit Experiment Station, maintained at Fontana, Calif., by the Division of Fur Resources, Bureau of Biological Survey.

may be in a bloated condition, the abdomen distended with gas, but the presence and degree of this symptom are quite variable. There also may or may not be a diarrhea, but usually a considerable quantity of a mucoid material is voided. In animals 5 to 8 weeks of age these symptoms may continue from 24 to 72 hours and usually terminate in death. In junior and adult animals, however, the duration is usually much longer, and the condition less frequently fatal. Autopsies of young animals reveal few, if any, gross changes. The stomach and upper portion of the small intestine are usually filled with water and occasionally distended with gas. In a few cases the lining of the small intestine shows congestion or redness. Part of the colon, or lower bowel, frequently contains a large quantity of clear, viscid, mucoid material. The posterior end of the bowel is usually empty.

In the older animals the disease may be present for a sufficient length of time to produce gross changes. In other instances, lesions are not such that a distinct differentiation between this malady and certain types of acute dysentery can be made. No changes in lungs, liver, or spleen have been found except as a secondary result.

There is as yet no effective treatment for "bloat" in animals under weaning age, and the mortality among those affected with the disease may be as high as 95 per cent if no control measures are undertaken. The value of the affected animal does not usually warrant individual treatment; moreover some proprietary compounds advertised as having beneficial effects have proved worthless. At the U. S. Rabbit Experiment Station, at Fontana, Calif., affected animals have been isolated without water for 24 hours and without food for 48 hours. Thereafter they were given only small quantities of water, and fresh green feed. If an animal seems to relish food, the quantity may be increased gradually each day, grain and hay being added to the ration. Feed may be withheld from older animals 4 or 5 days without their showing evidence of distress. Under such procedure, approximately 80 per cent of the older animals recover.

Since treatment of this disease is at present unsatisfactory, success in combating it lies in prevention. This has been accomplished at many commercial rabbitries through strict observance of the kind and quality of feed supplied in conjunction with a periodical change in diet. Extreme care should be exercised in selecting the hay or grain to be used, as present information indicates that many occurrences of this disease are directly traceable to the use of alfalfa hay of inferior quality or which is improperly cured. The use of grain of poor quality or grain that is spoiled may also produce a similar condition.

When losses from bloat occur, it is advisable to begin immediately a gradual change in the ration, even though that in use is desirable and adequate from the nutritional standpoint. This must be gradual, however, as a sudden change may aggravate the condition. A portion of the new ration should be mixed with the old and the quantity of the new increased daily, so that the animals may become accustomed to the change. To effect a complete change in the diet without deleterious effects will require approximately 5 or 6 days. A small quantity of fresh green material may well form part of the daily rations. Until further information is available, the only known safeguard against bloat is to watch feeding practices closely and note the health of the young animals. By detecting signs of danger at the earliest possible moment, appropriate changes in the diet can be made before losses become serious.

The Biological Survey has for some time been making a detailed study of bloat at the United States Rabbit Experiment Station. Further recommendations for prevention or specific treatment will be offered, as developed, as a relief from a disease that at present seriously impedes the rabbit industry.

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Biological Survey
Washington, D. C.

July 1, 1933.

Memorandum to Field Personnel
Regarding Travel for Fiscal Year 1934.

The severe curtailment of Bureau funds available for expenditure during the fiscal year 1934 makes imperative the keeping of all expenditures to the lowest point possible in the carrying out of authorized work.

This is especially necessary in connection with traveling expenses which amount to around 12% of the total Bureau appropriation. Any savings effected on this item will mean less drastic cuts on personnel which the Bureau is endeavoring to retain at as high a level as is possible with available funds.

Some revision of the per diem rates in lieu of actual expenses for subsistence as worked out for the last fiscal year was inevitable because of the more or less tentative basis on which they were established and a number of changes have been found necessary. Due to the necessity of holding per diem rates for subsistence to the absolute minimum required for actual reasonable subsistence expenses and to provide uniformity in rates throughout the Service so far as possible the following general rates have been adopted for application during the fiscal year 1934 or until further notice, to all field leaders of projects and their assistants:

For travel performed mainly in States west of the Mississippi River the per diem rate shall not exceed \$3.40.

For travel performed mainly in States east of the Mississippi River the per diem rate shall not exceed \$3.80.

For trips involving absence from official station of less than 24 hours during a period of the day when the procurement of lodging is not necessary per diem will be at the rate of \$1.60 per day.

For official travel on Bureau boats per diem shall not exceed \$1.20; when operating from Government owned or controlled camps, lodges and other places where lodging is furnished by the Government without charge per diem shall not exceed \$1.50 subject to provisions of Paragraph 47 (a) of the Standardized Government Travel Regulations.

A higher per diem rate than specified above will be granted only in exceptional cases and where it is clearly shown that it is impracticable to perform official travel under the particular circumstances and keep reasonable subsistence expenses within the above rates.

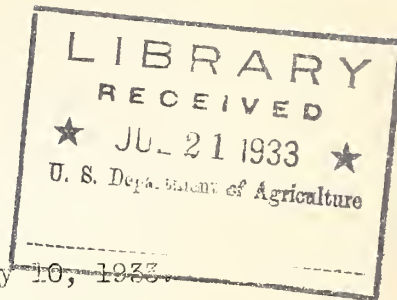
Authority for field leaders to fix per diem rates of their assistants within the rate limits specified in their authorization is being continued for the fiscal year 1934. The necessity for care in fixing per diem rates of assistants is even more important during the fiscal year 1934 than it was during the past year in order that such rates shall reflect only the actual, necessary and reasonable amount required for subsistence on the particular trip.

Paul G. Rodington
Chief.



Bi-1288

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Biological Survey
Washington, D. C.



July 10, 1933.

GENERAL MEMORANDUM

IMPORTANT INSTRUCTIONS relative to certification
and payment of services of field employees under
appointment.

(Superseding General Memorandum Bi-1168 of October 15, 1931 and amendments
of January 13, 1932 and February 3, 1932)

Hereafter field employees under appointment and carried on salary
rolls prepared in the Washington office will be paid semi-monthly, begin-
ning with the period July 1-15, 1933.

The sending of end-of-the-month telegrams regarding services will
no longer be necessary and should be discontinued. It will be necessary,
however, hereafter to submit certificates of service (Form 357) semi-
monthly. They must be forwarded promptly the morning of the 15th day of
each month, or, should the 15th fall on a Sunday or holiday, then on the
last working day before such Sunday or holiday, reporting service for the
first half of the month. (Should in any instance the 15th fall on
Sunday and the Saturday before be a holiday, form 357 should then be sent
on the 13th.) Certificate of service covering services for the last half
of the month must be forwarded promptly on the morning of the last working
day of the month. Instructions as to dates of submission as printed on
form 357 are modified accordingly.

Regular semi-monthly payrolls covering the services of those em-
ployees whose forms 357 have been received will be prepared on approxi-
mately the 20th of the month, covering the first half, and the fifth of
the following month, covering the last half of each month. It is highly
important, therefore, that each employee prepare and mail promptly cer-
tificate of service as above instructed. Failure to do so will result
in delayed payment of salary should form 357 not be on hand when regular
semi-monthly pay roll is prepared in the Bureau.

By payment of salaries semi-monthly as herein set forth each em-
ployee affected should, it is believed, be able to so adjust his finances
that no great inconvenience will result because of the somewhat later
date of receipt of salary check for the last half of month.

There will be no change in the submission of salary rolls for em-
ployees under appointment or paid under letters of authorization which
are prepared at field stations. Such rolls will continue to be prepared
in the field at the close of each month to cover services rendered during
such month. It is important to remember, in this connection, however,
that where an employee paid on pay roll prepared in the field works a part
of a month, especially during the earlier part thereof, and it is not ex-
pected that he will again be employed during the remainder of the month,
he should not be required to wait for his pay until regular monthly field

roll is submitted, but his services should be covered by a separate pay voucher prepared and submitted to the Bureau for payment as soon as such services are completed.

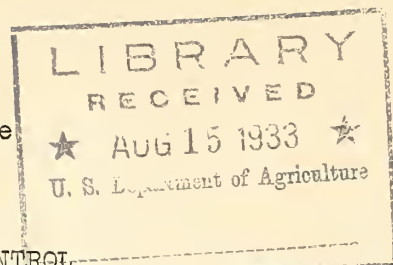
As we do not know just when this memorandum will reach field employees, especially those in the far western States, form 357 covering services for the first half of July should be prepared and forwarded to the Bureau as soon as this memorandum is received if such date is the 15th of July or later. If earlier the form should be submitted promptly on the morning of July 15 as above instructed.

W. C. Henderson

Acting Chief.

Bi-1289
July '33

United States Department of Agriculture
Bureau of Biological Survey



DIRECTIONS FOR USING POISON IN CHIPMUNK CONTROL

Poisoned grain is one of the most effective agents for controlling chipmunks which often become troublesome pests by digging up newly planted garden seeds. The poison mixture should consist of the following ingredients:

Dry gloss starch	1 heaping tablespoon
Strychnine (alkaloid), powdered . . .	1 ounce
Baking soda	1 ounce
Corn sirup	1/4 pint
Glycerine	1 tablespoon
Saccharin	1/10 ounce
Clean oats	16 quarts

Dissolve the dry gloss starch in a little cold water and add to 3/4 pint of hot water. Boil, stirring constantly, until a thin clear paste is formed. Mix together the powdered strychnine (alkaloid) and baking soda, sift into the hot starch paste, and stir to a smooth creamy mass. Add the corn sirup, glycerine, and saccharin and stir thoroughly. Pour this mixture over the oats and mix so that each grain is evenly coated. It is important that only the best grade of clean oats, free of weed seeds, be used, as chaff absorbs and wastes much valuable strychnine, and use of poisoned weed seeds imperils valuable bird life and aids in the spread of weeds.

Strychnine in any form other than powdered strychnine (alkaloid) is not effective in the above formula. A bait almost as effective may be prepared by using strychnine sulphate, as follows:

Dissolve 1 ounce of strychnine sulphate in 1-1/2 pints of boiling water. After the strychnine has dissolved, make the starch paste as directed above, using this hot, poisoned water for the purpose. Then stir in 1 ounce of baking soda, add sirup, glycerine, and saccharin and proceed as in the above directions.

The baits should be scattered in teaspoon quantities, about the entrance of burrows or near runways used by chipmunks. The grain should not be placed in piles, but should be scattered lightly, preferably on hard clean ground. It should not be placed on loose or dirty ground or in the holes. When properly distributed there is very little danger of poisoning livestock. The bait should not be exposed, however, where hogs or poultry are likely to pick it up.

CAUTION!

All utensils used in the preparation of poisons and all poison containers should be kept plainly labeled and out of reach of children, irresponsible persons, and livestock.
